



REMR MATERIAL DATA SHEET CM-PC-1.6

CONCRETE PATCHING MATERIAL: DECO-REZ 3577LV

1. NAME

Deco-Rez 3577LV
Structural Resin Compound

2. MANUFACTURER

General Polymers Corp.
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Cincinnati, OH 45212
Telephone: 513-631-0649

3. DESCRIPTION

Deco-Rez 3577LV is a 100-percent solids, moisture-insensitive epoxy system designed for low modulus of elasticity and stress relief properties with variations in temperature. This system provides excellent overlays and patches for bridge decks, mortars for patching horizontal spalls in portland-cement concrete, and forming bridge deck expansion joint nosings. The low modulus formulation provides stress relief and shock-absorbing characteristics in environments that have cycles of freezing and thawing. The combination of high tensile strength and tensile elongation provides for greater durability under impact and thermal stress.

4. APPLICABLE SPECIFICATIONS

ASTM C 881, "Standard Specification for Epoxy Resin-Base Bonding Systems for Concrete," is a guide in specifying the materials.

5. USES

SRC 3577LV is a low-viscosity resin system for use with aggregates for epoxy-mortar overlays and patches for portland-cement concrete. It is easily used in grouting, patching, and pressure-injection type applications.

6. MANUFACTURER'S GUIDANCE FOR APPLICATION

Surface preparation: Surfaces to be covered must be clean and sound. Concrete must be free of dust, laitance, grease, sealers, curing compounds, and other foreign contaminants that will prevent bonding. The surface should be prepared by sandblasting, water blasting, or mechanically scarifying to open the surface for bonding.

Unsealed surfaces may be treated with 15-percent hydrochloric acid and then thoroughly rinsed with water.

Deco-Rez Systems Instructions for Surface Preparation (Form 6-1) gives detailed surface preparation information.

Mixing: The volumetric mixing ratio of SRC 3577 is 2 parts of Part A to 1 part Part B. The epoxy should be mixed thoroughly with a low-speed electric drill and paddle for 3 min or until it is uniform. Only that amount of material that can be used in 25 to 30 min should be mixed at a time.

Application: Deco-Rez 3577 is used for overlays, patching, and mortars. The surface should be primed with neat resin (premixed resin-hardener and no

aggregate). The resin-hardener mixed with selected aggregate (approximately 4 parts aggregate to 1 part mixed resin) is best applied with a trowel. For thin overlays, neat, premixed resin-hardener should be spread at a rate of approximately 50 to 80 sq ft/gal. Clean dry aggregate broadcast into the wet epoxy binder creates a nonskid surface. A sealer coat of 3577LV should be applied for optimum results.

Estimated coverage: One gallon Deco-Rez 3577LV, when mixed 1 to 4 with dry, selected aggregate, will yield approximately 900 cu in. (slightly more than 1/2 cu ft) of mortar. Amounts of dry aggregate can be varied to change the consistency of the mortar.

7. MANUFACTURER'S TECHNICAL DATA*

<u>Typical Properties at 75° F</u>	<u>SRC 3577LV</u>
Mixing ratio (Part A/Part B) by volume	2/1
Viscosity, Brookfield, centipoises	400-450
Pot life, min	25-30
Tack free (thin film), hr	5-8
Hardness, Shore D, after 24 hr	70-74
Initial cure, hr	6-7
Final cure (75-percent ultimate strength)	7 days
 Tensile strength, psi	 3,500 min
ASTM D 638	@ 14 days
Compressive strength, psi	9,000 min
ASTM D 695	
Tensile elongation, percent	12-18 @
ASTM D 638	14 days
Compressive modulus, psi	220,000 max
ASTM D 695	
 <u>Mortar Properties with 4 Parts Sand</u>	
Compressive strength, psi	8,000 min
ASTM C 579	
Compressive modulus, psi	300,000 max
Color	Neutral (straw color) when mixed

* Values will vary with temperature and humidity changes.

8. CORPS OF ENGINEERS' EVALUATION

Technical data:

<u>Performance Properties at 73° F</u>	<u>Test Method</u>	<u>Results</u>
Viscosity, centipoises	ASTM D 2393	580
Gel time, min	ASTM C 881	36.5
Bond to concrete, psi	ASTM C 882	1,980
Effect of moisture on bond strength, psi	ASTM C 882	570
Compressive strength, psi	ASTM D 695	7,320
Young's modulus of elasticity, psi	ASTM D 695	2.76×10^5
Tensile strength, psi	ASTM D 638	2,300
Tensile elongation, percent	ASTM D 638	11
Flexural strength, psi	ASTM D 790	2,570
Shrinkage volumetric, percent		3.65
Hardness	ASTM D 2240	68
Water absorption, percent	ASTM D 570	0.37

9. ENVIRONMENTAL CONSIDERATIONS

Reasonable caution should guide the preparation, repair, and cleanup phases of sealant activities involving potentially hazardous and toxic chemical substances. Manufacturer's recommendations to protect occupational health and environmental quality should be carefully followed. Material safety data sheets should be obtained from the manufacturers of such materials. In cases where the effects of a chemical substance on occupational health or environmental quality are unknown, chemical substances should be treated as potentially hazardous toxic materials.

10. AVAILABILITY & COST

Availability: Deco-Rez 3577LV is normally marketed throughout the United States.

Cost: Cost information is available upon request.

11. TECHNICAL SERVICES

Skilled representatives of General Polymers Corporation are available throughout the United States. Write or telephone direct to General Polymers Corporation for assistance.